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ABSTRACT

This study focuses on the benefits of early retirement as a policy to ease the adjustment process as public school districts and state universities encounter the problem of declining enrollments. Early retirement as one means of reduction in force, and as a means of saving money, has been adopted by 36 Illinois school districts. This paper examines a retirement policy that allows members of the Teachers' Pension and Retirement Fund of Chicago and the Teachers' Retirement System of Illincis who have 20 or more years of service to retire at age 55 without a discount of their pension annuities. (Author)

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EARLY RETIREMENT: A PROPOSAL for ADJUSTMENT to DECLINING ENROLLMENTS

State Board of Education
Illinois Office of Education
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April 1977

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FOREWORD

Declining enrollments in elementary and secondary schools in Illinois have required the evaluation of old policies and the development of new policies. In order to cushion the impact that declining enrollment has upon the state aid received by school districts the State Board of Education recommended, and the legislature adopted, a modification in the state aid formula which allows school districts to average their average daily attendance over a three year period. Another recommendation of the Illinois Task Force on Declining Enrollments, to amend the statutes with respect to teacher retirement in order to encourage retirement at the age of 55 after 20 years of service, led to this study. It is hoped that the information provided in this publication will facilitate an informed evaluation of the benefits of the early retirement proposal to school districts and its implications to participants in the retirement system. The impact of the proposal upon legislative appropriations was not determined in this study and will be the subject of future investigation.

The study was conducted and the report was written by David F. Ellsworth from the Research and Statistics Section, Illinois Office of Education with the cooperation of the Public School Teachers' Pension and Retirement System of Chicago and the Illinois Teachers' Retirement System. Sincere appreciation is expressed for their assistance.

Joseph M. Cronin
State Superintendent of Education

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INTRODUCTION

This study focuses upon the benefits of early retirement as a policy to ease the adjustment process as public school districts encounter the problem of declining enrollments. The introductory section provides the reader with background information on the problem of declining enrollments in Illinois public schools and briefly describes one policy--that of early retirement--that has been adopted by 36 Illinois public school districts. The remainder of the paper examines the espoused merits of a retirement policy which allows members of the Teachers' Pension and Retirement Fund of Chicago and the Teachers' Retirement System of Illinois who have 20 or more years of service to retire at age 55 without a discount of their pension annuity.

From Enrollment Growth to Decline: The Problems of Adjustment

Between the end of World War II and the fall of 1971 K-12 enrollment in Illinois rose from 1.10 million to 2.37 million. Each year since 1971 enrollment has declined, reaching 2.25 million in the fall of 1975, a decrease of 5.3% over a four year period. As can be seen in Table 1, enrollment is projected to decrease to 1,857,000 by the fall of 1985, or decline another 17.5% with the rate of decrease accelerating over the next five years, or between 1976 and 1980 (6). Enrollments beyond 1985 are difficult to project. Much depends upon attitudes: when to marry, when to begin a family, and the ideal family size. These are reflected by the birth rate. The present birth rate in Illinois is less than 1.9 children per female of child-bearing age, or below the zero-population growth birth rate of 2.0 children per female of child-bearing age. The increase in live births expected over the last two years, due to a greater number of women at child-bearing age, has not

Table 1. PROJECTIONS OF ILLINOIS PUBLIC SCHOOL FALL ENROLLMENT

School Year	Kindergarten a/	Elementary (1-8) b/ And Special Education	High School c/ And Special Education	Total (K-12) Enrollment
1976-77	159,841	1,336,937	723,784	2,220,535
1977-78	144,036	1,310,843	712,271	2,167,150
1978-79	135,463	1,272,742	699,674	2,107,879
1979-80	134,076	1,239,078	677,523	2,050,677
1980-81	132,906	1,210,989	655,208	1,999,103
1981-82	135,000	1,187,739	632,943	1,956,000
1982-83	136,000	1,710,000	610,770	1,917,000
1983-84	136,000	1,153,000	601,333	1,890,000
1984-85	136,000	1,130,000	604,354	1,870,000
1985-86	136,000	1,116,000	604,212	1,857,000

Note: Enrollment projections above the broken line are based upon actual live births while enrollment projections below the broken line are based upon projected live births and rounded to the nearest thousand.

a/ Assumes that the 1970-75 average annual -1.02 percent decline in the survival ratio will continue from 1976-77 through 1985-86.

b/ Assumes a continuation of the 1971-75 average annual -0.165 percent decline in the survival ratio.

c/ Assumes a continuation of the 1970-75 average annual +0.0037 percent increase in the survival ratio.

occurred. If this pattern and out-migration continues for the next ten years there will be no significant increase in public school enrollment throughout the remainder of the 20th century.

Declining enrollments have been reflected by a decrease in demand for teachers. "While the total number of teachers in Illinois has exhibited steady growth through 1974-75 the demand for new teachers in Illinois peaked in 1969-70 and has experienced a somewhat erratic downward trend since then...total teacher demand has dropped by 9,622 or 53.6 percent in the last six years" (1, p. 35). The fall of 1975 saw the first decrease in the number of elementary teachers.

In 1971-72 the long-standing trend in which the demand for new teachers was greater than the supply was reversed. However, in that same year 12 public and 49 private institutions of higher education prepared 16,650 new Illinois graduates for teaching careers, but only 12,401 positions were available. Since then there has been a persistent oversupply of teachers, and although the supply of new teachers began to decrease in 1972-73, the rate of decrease in demand has consistently exceeded the rate of decrease in supply. An Illinois Office of Education study has projected that by 1978-79 there will be 2.8 teaching graduates for every teaching position available (1, p. 51).

In part the pressure for fewer teachers during a period of declining enrollments is due to the loss of revenue which accompanies enrollment shrinkage. Under the school aid formula there is a direct relationship betweer the state support a school district receives and its enrollment. Analysis prepared by the Task Force on Declining Enrollments indicates that for those districts using the resource equalizer formula the loss

of one student is associated with a decrease in state aid of $769 in high school districts, $920 in elementary districts, and $951 in unit districts (13, p. 33). 1/

On the other hand, it is relatively difficult to adjust expenditures to reflect the decrease in enrollment. Significant expenditure adjustments can be made, usually, only when enrollment has decreased sufficiently to justify the reduction in the number of teachers, administrators and other employees, as well as the closing of buildings. For example, although elementary enrollments peaked in the fall of 1970 it was not until between the 1974-75 and 1975-76 school year, or five years later, that the first reduction in elementary staff occurred on a state-wide level. The Illinois Task Force on Declining Enrollments estimated that only 13 percent of a school district's expenditures are variable and can be adjusted within a given year. The largest population of the expenditures (74%) are fixed for from two to ten years (13, p. 27).

With revenue decreasing and expenditures fixed for a short to intermediate period of time, it is easy to visualize the financial difficulties created by declining enrollment. The Illinois Task Force on Declining Enrollments explored cost reduction alternatives which included facility closing and reductions in force (administrative and teaching). Among the reduction in force alternatives consideration was given to encouraging early retirement.

There are a number of alternative early retirement plans. Lacking a state-wide early retirement plan, individual colleges, universities

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1/ These data refer to the decrease in state aid for those districts using the resource equalizer. Those districts using the Strayer-Haig formula for determining state aid lose fewer dollars in state aid primarily because they are smaller (in terms of ADA), are wealthier (in terms of assessed valuation) and have lower operating tax rates.

and school districts have developed early retirement plans (3, 4, 7, 25, 29, 33). Generally these plans are directed towards staff members who are two to five years younger than the mandatory retirement age. In 1976-77, 36 Illinois school districts (12 elementary, 16 secondary and 8 unit districts) had an early retirement incentive program paid for from district funds. Typically, individualized early retirement plans include all or part of the following features which are intended to be early retirement incentives:

(1) Contractual arrangements where the retiree provides a service to the school district for a fee related to the income at the time of retirement;

(2) A severance payment, either in a lump sum or over a period of months or years and either to the individual or his/her annuities;

(3) Contributions to the retirement system and the social security system continued by the institution or the school district, and based upon some projected income likely to have been received at retirement age;

(4) Full major medical and/or hospital coverage.

One direction state policy could take is to subsidize plans developed individually by institutions or school districts (see Appendix A for an early retirement plan being used by one Illinois school district). However, if the problems created by declining enrollment continue for some period of time in the future, then such ad hoc approaches provide only marginal solutions to a more widespread problem. As Hopkins stated, in discussing the problem facing universities, "A more appropriate response would be to examine the incentive structures of retirement systems as they are presently constituted in an effort to determine whether these systems have been designed with the interests of education, as well as the individual, in mind" (10, p. 7). That is the approach taken in this study. Such a position was taken by the Illinois Task

Force on Declining Enrollments. The Task Force endorsed "the position of the Board of Trustees of the Illinois Teachers' Retirement System supporting legislation providing for retirement at the age of 55 or after without discount with 20 or more years of credited service" (13, p. 51).

The alternative examined is for the state to alter the requirements for retirement within the teacher retirement system, reducing the age at which a contributor to the system can retire without altering the benefit structure.

Objectives of Study and Definitions

The purpose of this study was to investigate the benefits of allowing teachers and administrators with 20 or more years of credited service to retire at age 55 without discounting their annuity benefits.

Specifically, the objectives of the study were:

A. Identify the incentives and disincentives to the individual considering early retirement under the present retirement system and under the proposed early retirement system; and

B. Determine the benefits which will accrue to the school districts and the State due to the adoption of the early retirement proposal.

To assist the reader, some terms which will be used throughout the study need to be defined. They are as follows:

1) Early retiree - an individual with less than 35 years of credited service who voluntarily ends regular employment within public elementary and secondary education in Illinois before the age of 60.

2) Credited service - service for which pension credits are granted for the purpose of determining the pension. Credits are granted on the basis of a formula specified in Article 16 and Article 17 of Chapter 108 1/2, Illinois Revised Statutes.

3) The present retirement system - consists of both the Public School Teachers' Pension and Retirement Fund of Chicago and the Teachers' Retirement System of the State of Illinois. Under both systems the base pension benefit is determined by a

formula having two components: (a) a salary average and (b) a graduated formula. Retirement age is considered to be age 60 or the age of the retiree when he/she achieves 35 years of creditable service. If the individual retires between the age of 55 and 60, but has less than 35 years of creditable service, the base annuity is reduced by 6% for each year less than 60 years of age (see Appendix B for a contrast between the present and the early retirement option).

4) Average Salary - The average of the salaries for the four highest consecutive years during the last 10 years of service. That average salary is then multiplied by the graduated formula to obtain the annual base pension benefit.

5) The graduated formula - the graduated formula allows 1.67% for each year of creditable service for the first 10 years of service, 1.9% for each year of creditable service greater than 10 but less than 20, 2.1% for each year of creditable service greater than 20 but less than 30 and 2.3% for each year in excess of 30.

6) The early retirement proposal (or option) - has three components which affect benefits: (a) provide for retirement, without discount, between the ages of 55 and 60 with 20 or more years of service; (b) replaces the graduated formula with a flat rate formula of 2% of average salary for each year of service, and (c) increases from 2% to 3% of base pension the annual amount of post-retirement increases in the base annauity. A fourth component of the proposal, designed to assist paying for it, is to increase member contributions from 8% to 9% of creditable earnings (effective July 1, 1977)--see Appendix B for a comparison between the present retirement system and the early retirement proposal.

7) Base retirement annuity - the annual benefit to be received by retirees as determined by the application of the formula to the average salary, prior to application of annual post-retirement adjustment.

8) The disincentive effects - those characteristics of the retirement system which discourage early retirement (or are incentives to continued service).

The reminder of this paper is divided into three sections. The section which follows discusses policies designed to increase leisure as a policy to ease the adjustment from a growth to a declining industry. The second section of the paper examines commonly referred to merits of the early retirement policy. The third, and last, section of the paper,

assesses the financial relief which will accrue to school districts as a result of adoption of the early retirement porposal. As the rate of participation in the early retirement option is critical in determining the financial relief to school districts, the relationship of early retirement to the individual is discussed in the first part of the last section.

RETIREMENT AS AN ADJUSTMENT POLICY

The development history of nations is one characterized by increased leisure for the working force. While the substitution of capital for labor increased the output of American labor, it also made possible the increased amount of leisure on the part of the American work force. The length of work week has been one of the most crucial issues facing the American Labor Movement. In part, this is reflected by the fact in 1920 the average non-farm work week was 51 hours (31, p. 168) and decreased to "39.8 hours in 1950 and 35.7 hours by April of 1975" (32, p. 353). The advent of the five-day workweek is dated to be in 1908, with only 5% of the American work force on this schedule by 1929.

By the late 1960's the interest in increased leisure focused upon a four day workweek. "At the present time, there are about 10,000 corporations with approximately a million employees on a four-day week" (26). The issue no longer seems to be whether or not there will be a four-day workweek. Industrial relations managers expect that the four-day work schedule will be fully implemented over the next decade. Rather the debate seems to focus on whether it will be a four-day, forty hour week on a four-day, thirty-two hour week. As was stated in a recent article in the New York Times, "...the march toward a four-day, 32-hour workweek has begun in earnest..." (24).

Studies in the private and public sectors of the economy indicate that in many instances a reduced work week increased efficiency and is well received by employees. Those managers that like the four-day work week cite the following advantages: increased output, lower production costs, better utilization of capital equipment, and reduced absenteeism and tardiness. From the employee's point of view, the extra day of leisure and the 20 percent reduction in lunch expenses and commuting

time has made the four-day week welcome in many households. Managers that dislike the innovation talk in terms of scheduling problems, the increased workload for supervisors, and difficulties in providing a timely response to consumers and suppliers (9, 17, 24, 27, 28).

As of late the interest in increased leisure has focused more upon early retirement. Early retirement has gained favor among unionized labor in the automotive, steel and aluminum industries, and in certain civil service occupations. A prize sought in a number of union contracts is a provision of "55-20 and out" which refers to retirement at full benefits at the age of 55 and after 20 years of service (15, p. 9). While reflecting the desires of their members for increased leisure, organized labor has also argued that in a society characterized with high joblessness early retirement would provide meaningful occupations to the unemployed and the underemployed throughout the society (17, 24).

Most recently interest in early retirement has sprung from the administrators of educational institutions. Most of the literature on early retirement began to appear in 1973 and related to the adjustment problems which universities were then facing--as in elementary and secondary education, problems arising due to declining enrollments (2, 3, 8, 11, 12, 16, 19, 21, 22, 25, 29). After decades of seemingly uninterrupted growth, the educational sector now faces a difficult adjustment period of a shrinking student body. Declining enrollments, which have occurred over the last four years, are projected to continue over the next decade.

Enrollment shrinkage creates a number of interrelated problems for school districts--a fiscal crunch of reduced state aid while costs continue to rise, underutilized and unutilized facilities, an aging staff at the high end of the salary scale with limited opportunities for

fresh, new staff starting at beginning salaries. While there is increasing citizen pressure for reduced educational expenditures there continues to be a demand for higher quality education for their children.

Assuming that sufficient resources are presently committed to education for its efficient organization and operation, economic efficiency requires that, unless the quality of education can be substantially improved by maintaining existing resource commitments, as enrollments decrease the resources directed to education should be reallocated within education and shifted to other sectors of the economy.

Resource adjustment presents serious problems for educational policy makers and administrators. As difficult as any problem, if not most, is the need for reductions in force. With an average of 66 percent of the educational fund expenditures utilized for salaries of certificated administrative and instructional staff,[1/] significant cost reductions can follow only from reductions in the educational work force.

Normal attrition will not achieve the required reductions in force. The net change in Illinois certificated full-time staff reported between this year and last, equal to 3,109 positions (see Figure 1), could only be attained by terminations supplemented by not filling vacated positions.

With the dramatic enrollment decreases to be felt over the next five years, prospects are not bright for employer-employee relations as it becomes necessary for further, and even more drastic, staff cuts. A 1973 study by the Education Research Service, after a thorough search of several hundred school system policy manuals and more than 1500 recent teacher negotiation agreements, found less than 40 policies or provisions

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[1/] Data from the state summary of the 1974-75 Annual Financial Report of Illinois School Districts.

NET CHANGE IN CERTIFICATED FULL-TIME STAFF, BY COUNTY-FALL, 1976

The upper figure represents the number and the lower figure the percentage change when compared to the Fall of 1975.

- FIGURE 1 -

State Total: -3,689
-2.4%

relating to reductions in force of the teaching staff (5). It should be expected that reduction in force issues will receive increased attention in collective bargain negotiations.

Administrators in educational institutions became interested in early retirement as a solution to a set of interrelated problems--declining enrollments, an aging staff with little opportunity to hire new staff or promote those with demonstrated competencies, and persistent budget problems (8, 11, 12, 15). These problems call for the adoption of policies which will ease the adjustment process as education shifts from a growing to a declining sector within the economy.

According to Slater (25), Peterson (23), Hopkins (11, 12) and others (2, 8) early retirement as a policy to ease adjustment from a growing to a declining industry has a number of advantages:

(1) Early retirement by those 55 and above provides salary relief to the local districts.

(2) Early retirement by senior staff members and replacement by young, beginning teachers provides job opportunities where there is a surplus of qualified candidates.

(3) The continued lack of opportunity to hire new staff will create an aging teaching staff. Early retirement will create a younger staff.

(4) Evidence suggests that a substitution of beginning for experienced staff does not result in a reduction of teaching effectiveness, and may actually improve it.

(5) The retirement of school administrators increases upward mobility within the districts.

MERITS OF THE EARLY RETIREMENT PROPOSAL

The primary purpose of this paper is to estimate the relief that will be provided to local school districts if the early retirement proposal were adopted. Before beginning that task some comments should be directed towards the other advantages of the proposal.

To Improve the Balance Between Supply and Demand for Teachers

As stated earlier, the supply of new teachers exceeds the demand for them. One consequence of an oversupply of teachers is that persons seeking positions as teachers may have a difficult time finding employment. On the other hand if early retirement were made more attractive to school personnel, the imbalance between the supply and demand for new teachers would be improved. Over the next ten years 28,700 of the present administrative and teaching personnel would become eligible for retirement at age 55. The number that would be eligible the first year of the program, roughly 8,000, would be nearly equal to the oversupply of teachers over the last three years.

Although the increased vacancies would provide opportunities for new teachers, two problems of adjusting supply and demand would remain. First, in addition to new teachers trained annually by universities and colleges, there is a substantial reserve of trained teachers who have left teaching but who may reenter the teaching force. Approximately 48 percent of the personnel who worked in the downstate school districts in 1975-76 and who were not working in the districts in 1974-75 were reentering teachers. Secondly, with new and reentering personnel there will be a continuing need to match the skills available in the teacher pool with the needs of school districts. Areas within education where the least oversupply or a shortage exists include industrial arts,

agriculture, mathematics, industrial oriented occupations, health education and most fields in special education. Improved communication between local school districts and teacher training institutions could reduce unemployment and underemployment resulting from the mismatch of skill needs with skills available.

Prevent the Aging of the Staff

The reduction in demand for new teachers is, no doubt, related to the period of retrenchment through which school districts are now going. New personnel are required to replace staff who are retiring or resigning for some other purpose. With teaching jobs so hard to find it is not unexpected that the turnover of school personnel has declined. Whereas in 1968-69, 14.8% of the teaching and administrative positions had new occupants, turnover decreased to 8.7% by 1974-75.

With low turnover and the elimination of teaching positions, school districts are finding little opportunity to hire new teachers. The number of first year teachers has decreased 30% over the last two years and represented only 4.8% of the teaching force in 1975-76. Although the median age of teaching personnel is relatively young (34 years of age), continued lack of opportunity to bring in new teachers will result in an aging classroom staff.

Addressing the problem from a different perspective the Commission on Academic Tenure in Higher Education recommended that each institution develop policies relating to the proportion of tenured and nontenured faculty compatible with the composition of its present staff, its resources, projected enrollment, and future objectives. Specifically the commission stated "...it will probably be dangerous for most institutions

if tenured faculty constitute more than one half to two thirds of the total full-time faculty during the decade ahead" (2, p. 50).

The oversupply of teaching personnel and the aging of the teaching and administrative staff have a number of economic implications:

(1) The resources committed to the training of teachers have been, at least in part, wasted in that more qualified personnel were produced than were required;

(2) The investment by society and by individuals in order to prepare for an occupation is wasted to the extent that those individuals must find work in a profession other than that for which they trained. The social costs are compounded to the extent that individuals can find no employment.

(3) All other things being equal, low turnover and an aging staff means more money will be required for salaries than would be true under conditions of higher turnover and a continued infusion of new, beginning teachers.

In addition to the financial implications of an aging staff there is a body of evidence which indicates that there is an inverse relationship between effectiveness as a teacher and age. Tuckman (30) found that although the number of years of teaching experience seems to improve college student performance on exams, graduate students appear to be as effective as faculty in teaching principles courses in economics. The effectiveness of graduate students as teachers is attributed to their ability of better grasp what students do not understand, a high degree of motivation, and greater approachability.

Directing his attention towards teacher effectiveness at the elementary and secondary level, Medley reports that "Whatever one's theory of the nature of teacher effectiveness may be, one would expect it to grow from experience: but the research evidence does not indicate that pupils learn more from experienced teachers than from inexperienced ones" (18, p. 15). In questioning high school teachers from a medium

sized city in the Midwest, Peterson found that, "In general, when asked about the best teaching period, either for themselves or for a teacher in general, they recognized a best teaching period while still young and vigorous" (23, p. 270). Peterson found that teachers feel when they were younger they were better able to communicate with students. "It is a matter of loss by the teacher of some kind of intimate, friendly contact with students, a matter of increased distance and formality" (23, p. 273).

The option of early retirement would be expected to accelerate the rate at which young staff, with new ideas, methods, and energy, could be substituted for more senior staff. As one suburban Cook County district superintendent wrote:

> Our school will be energized by giving job access to the brightest collection of young people ever to have come down the teacher training pike. Regretably, many of our acceptable, but clearly mediocre, teachers now in their fifties and early sixties gained tenure when the teacher supply was quantitatively and qualitatively at its lowest. While such teachers are not sufficiently incompetent to release under tenure, the discrepancy between their effectiveness and the young people we've been adding recently is becoming increasingly apparent to parents, administrators, and even the older teachers themselves.

Although the research cited concludes an inverse relationship exists between teaching effectiveness and experience (and/or age) the argument can justifiably be made that the state of the art with respect to measuring teacher effectiveness is so underdeveloped that such a conclusion is unwarranted. A safer conclusion is, therefore, that there is no evidence to suggest increased teacher effectiveness with age and/or experience. Even if there were no change in teaching effectiveness by substituting younger for older staff, the fact that the younger staff receives a lower salary means there would be an improvement in the operating efficiency of the educational system.

Another merit to using early retirement as a policy through which education could more easily adjust to the phenomena of declining enrollments is the financial relief which would be provided to school districts in Illinois. That is the subject of the remainder of this paper.

EARLY RETIREMENT: FINANCIAL RELIEF TO ILLINOIS SCHOOLS

As has been stated, early retirement by those between the ages 55 and 60 and with 20 or more years of service would provide relief to pressures on school district payrolls. In addition, reductions in force will lead to reductions in the indirect expenditures that support teaching and administrative activities and to reductions in expenditures for fringe benefits. The magnitude of the total expenditure relief is dependent upon the rate of participation among those eligible for early retirement and the number of the vacancies which are filled by new teachers.

As the rate of participation in the early retirement option is a critical variable in determining the magnitude of the relief, it is wise to gain some appreciation of the choice confronting individuals who have the opportunity to retire. Therefore, it is important to first examine retirement as it relates to the individual.

Early Retirement and the Individual

For the individual considering retirement there are a number of interrelated concerns. Those can be generally categorized as follows:

1) Would I rather continue working?

2) Would I enjoy more leisure time?

3) Can I afford to retire?

Early retirement is an extension of the widespread interest in more leisure time. However, warting more vacation time during the year is dramatically different from making the decision to retire. An important factor in that decision is enthusiasm for the job and how well an individual likes his or her colleagues. For teachers another consideration should be how well they like the students with whom they work. Bad

feelings about the job, the colleagues, or the students would increase the desire for retirement. Peterson (20) found an inverse relationship between age and teacher enthusiasm for their job.

The theoretical framework upon which Peterson based his study of high school teachers relates role and status of the employee during the span of life at work. In middle-class occupations, such as teaching, there tend to be four distinct phases: (1) a learning-oriented exploration phase in young adulthood accompanied by apprenticeship status and involving progressive acceptance or rejection by older, established members; (2) a secondary membership phase marked by high productivity in relation to the functions of the organization but lacking full recognition or responsibility; (3) a full membership phase that seems to occur in middle or late-middle age and involves maximum formal and informal prestige, authority, and responsibility within the organization; (4) a period of membership decline characterized by deference rather than prestige and by honorary rather than functional positions (23, pp. 266-267). Under this model enthusiasm for the job would increase slowly during the first phase, increase rapidly during the second phase, peak during the third phase and then begin to decline. Peterson's interviews indicated that by their late forties teachers' enthusiasm for teaching began to wane.[1/]

By the time the teachers reached their late forties and fifties they showed a concern about declining physical vigor, "...the long stretch ahead, the possibility of the burden becoming heavier, of

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1/ In an interesting note Peterson found that teachers entering a city school system often do not feel the same special satisfaction from teaching that is generally emphasized with first teaching. Peterson hypothesizes that this is because most teachers were older when they entered the city system, that there is a more severe beginner-acceptance problem, and that there is a greater distance between students and teachers in urban areas (23, p. 272).

interests declining, and of the distance between teachers and students increasing" (23, p. 275). It was in this group that Peterson found thoughts turning towards retirement and expression of interest in early retirement.

Some teachers past the age of 55 advocated a voluntary retirement age of 55. Among their comments:

> "I think there is no doubt about it; it is difficult for a teacher to do effective teaching as she grows older, for the teacher's sake, I think, as heavy as the load is, the teacher should be allowed to retire at 55 if she wants to" (23, pp. 275-76).

> "As you become older - I've heard so many teachers say this year, 'Oh, if I just had enough money, I'd quit tomorrow.' Teaching becomes...more difficult at the time...You don't get the type of work from the children that you used to. You don't find children that are interested in obtaining anything and it becomes a task..." (23, p. 276).

Even though a person may not be enthusiastic about his/her job that does not necessarily mean there is any enthusiasm for retiring. Patton found that satisfaction with retirement is significantly correlated to whether one had planned for retirement (22, p. 5). Consideration has to be given as to how to spend increased leisure time--what activities will be undertaken; what hobbies will be pursued, whether or not to travel. Looking forward to retirement requires that there be something to look forward to. However, the ability to enjoy retirement is related to the amount of retirement income, and retirement income is related to the consumption-savings pattern over a life span.

The difference between income after taxes while employed and retirement income can be substantial. The American Association of University Professors suggests that a retirement resource (from all sources which would include social security) should equal two-thirds of disposable income at the time of retirement. Disposable income is

basically take home pay or salary after taxes (3, p. 8). Patton found that of those persons that tend to be dissatisfied with their retirement decision, 35 percent were dissatisfied because of financial problems. Only seven percent of the respondents cited boredom as a reason for dissatisfaction (22, p. 4). Differences between the standards of living maintained while working and while in retirement can be greatly reduced, even eliminated, if the retirement plan includes a savings and/or investment component.

Social security, a frequent source of retirement income, is a form of savings which can cushion the adjustment from a working to a retirement standard of living. Medicare benefits are an important part of that cushion. However, social security is not available to a retiree until age 62, and then only at a reduced rate. Full social security benefits are paid only to those who begin drawing at age 65. In addition, neither the Chicago or the Illinois teachers' retirement systems are coordinated with the Social Security System. Unless the retiree can qualify for social security by employment other than teaching, that source of retirement income will not be available (16, 19). This provides an incentive to seek a summer job or a post-retirement second career which would allow the accumulation of social security credits.

Early retirement increases the importance of a retirement plan because early retirement shortens the period over which the person can accumulate wealth for use during retirement. At the same time, early retirement lengthens the length of time over which accumulated wealth must be spent (15, p. 5).

Many employees save above and beyond the requirements of a formal pension plan, increasing their savings in the ten year period prior to

retirement. By the time employees reach their early to mid-fifties the children are out of school and have established themselves. Therefore, it becomes possible either to spend money on themselves and/or to begin to plan for retirement. Early retirement may reduce such aggregate savings and thus may lower further the amount of retirement income.

Employees who plan to compensate for such potential retirement income losses will find that it is necessary to start saving more and saving sooner. Whether a family is able to alter the consumption-saving pattern by saving more while the children are still at home or in school may well have an impact upon whether one plans for early retirement. Without such planning, all other things equal, retirement income is certain to be less, possibly so low that early retirement is not a real possibility.

In studying the experiences of recent retirees from a university with a mandatory retirement age of 67, Patton found that "...early retirees tend to be more satisfied with their retirement decision than persons retiring at the mandatory age" and that "...early retirees were the persons who had planned for their retirement" (22, p. 5). He also found that early retirees were less dependent upon their retirement annuity as a source of income (22, pp. 21-24).

Aside from the differences in the standard of living attributable to whether a person can or does accumulate sufficient savings to make early retirement attractive, there are incentives within retirement plans for an individual to continue to work and contribute to the retirement plan. These incentives to continue to participate, or disincentives to retire, are related to the provisions of the retirement system.

Basically, pension systems are designed in such a way that the size of the pension annuity is related to the income earned while working, the length of participation in the system (i.e., number of years of creditable service) and the length of time over which a retiree can reasonably expect to collect the annuity. All other things being equal, the higher the income the higher the pension; the longer the number of years of service, the higher the pension; the longer the period over which payments must be made, the lower the pension. These represent disincentives to retirement but their financial consequences are greater for the early retiree. The disincentives are identified, below, as (1) the age discrimination effect; (2) the longevity effect; and (3) the salary growth effect. An additional disincentive discussed is defined as the "real income effect" which is related to the provision of the pension system to the extent that the base annuity received at the time of retirement does not keep pace with inflation.

The age discrimination effect exists due to the practice of the present system whereby the base retirement annuity of anyone with less than 35 years creditable service is discounted if that person retires before their 60th birthday. The base annuity is discounted at a rate of 6 percent for each year less of age less than 60, so that the base annuity is discounted by 30 percent if a person retires at age 55. This practice is referred to as the age discrimination effect because given two individuals with the same number of years of creditable service and the same average salary, but one is less than age 60 and the other age 60 when they decide to retire, the younger person receives a lower annuity due to the age difference. Adoption of the early retirement proposal would eliminate the age discrimination effect.

Actuarial arguments in support of lower base annuities for early retirees are as follows:

(1) The early retiree will provide less in contributions to the retirement system;

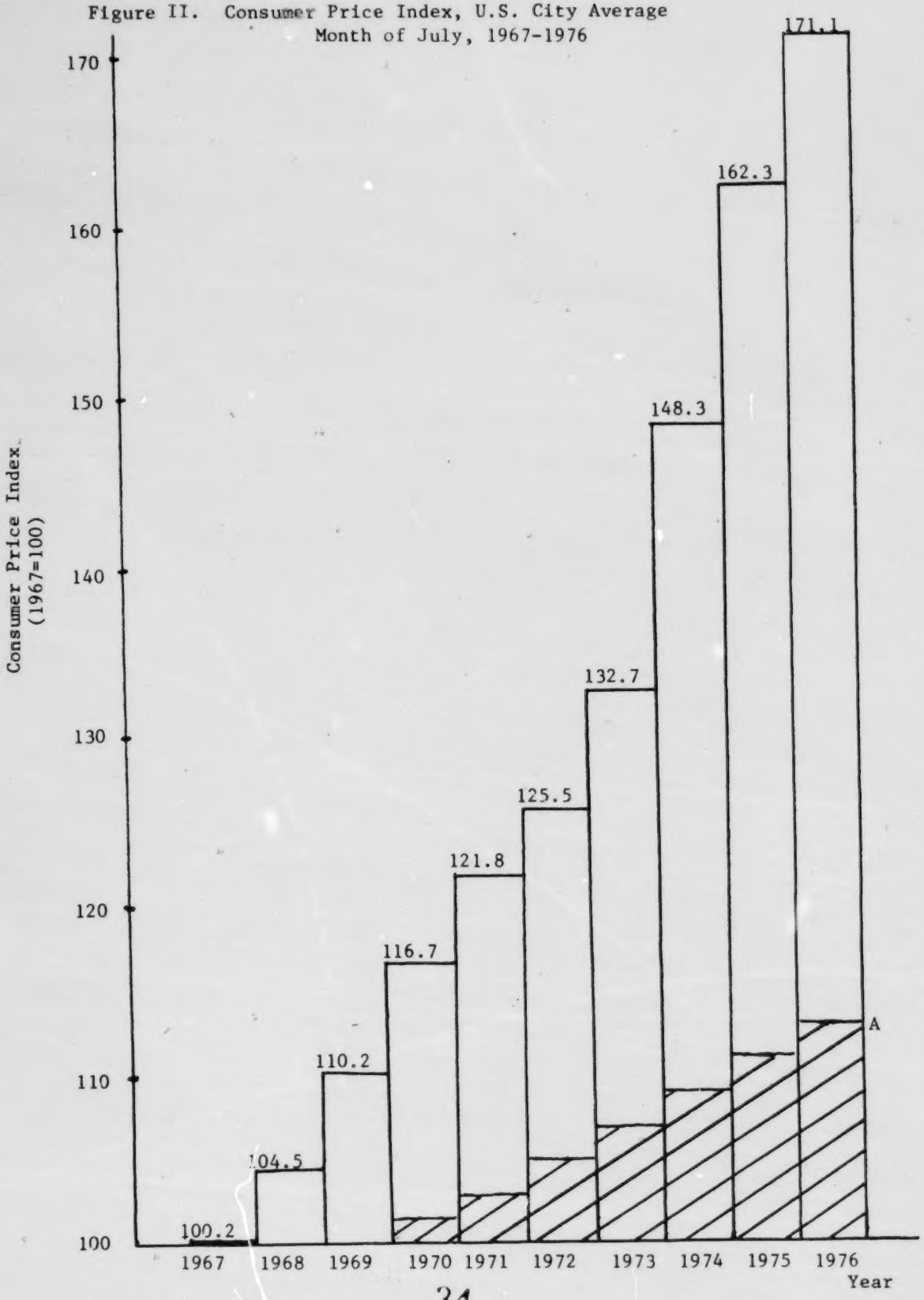
(2) With less in contributions and the early withdrawal of the base annuity, the retirement system will earn less in interest and dividend income; and

(3) The early retiree will draw his/her annuity over a longer period of time.

The longevity effect is the incentive to continue to add years of creditable service which can be attributed to the formula for determining the percentage to be applied to the average salary. For each additional year of creditable service a person receives a higher percentage of the average of the four highest consecutive years salary during the last ten years of service. Under the existing formula and the early retirement proposal an individual can receive a retirement annuity equal to 75 percent of their average salary. To do so would take slightly less than 38 years under the present graduated formula and would take 37 1/2 years under the flat 2 percent formula of the early retirement proposal.

The longevity effect of the present graduated formula was designed during a period of teacher shortages. As a staff report of the Illinois General Assembly recognized, the present formula "was designed to encourage extended service by providing an increasing rate of annuity" (20, p. 7). Under the present graduated formula the rate at which percentage points are accumulated increases with service to a maximum of 2.3 percent for each years service in excess of 30. The early retirement proposal would provide a flat percentage point accumulation of 2 percent per year of creditable service. Although there would continue to be a longevity effect until one has 37 1/2 years of creditable service,

Figure II. Consumer Price Index, U.S. City Average
Month of July, 1967-1976



the formula would no longer be progressively graduated and would become neutral with respect to extended service.

The salary growth effect is defined as the incentive to continue to add years of creditable service which is attributable to the increase in the average salary to which the formula determined rate is applied to determine the size of the base annuity. Over the past 13 years the average salary of regular classroom teachers has increased from $6,145 to $13,166 while that of district superintendents has risen from $10,620 to $25,415. All other things remaining equal, the higher one's salary the higher will be the retirement annuity. As long as salaries are increasing there is a salary growth effect.

To the potential early retiree the net implication of the three effects described above is that if early retirement occurs, lower levels of retirement income are spread over a longer period of time. The extent that the retirement income is subject to more purchasing power erosion due to inflation is referred to as the disincentive of the real income effect.

Over the last ten years the consumer price index for the month of July (U.S. City average) has jumped from 100.2 to 171.1 (see Figure 2). That is, the market basket of goods which cost $100.20 in July 1967 cost $1[illegible].10 in July of 1976, an average of the annual decrease in the value of the dollar of 7.9 percent.

The real income effect upon the retirement decision is double-edged. To the extent that wages and salaries keep pace with the rate of inflation, and the rate of increase in pension annuities lag behind the rate of inflation there is an incentive to continue working. The average salary of district superintendents has more than kept pace with

the inflationary spiral with an average annual rate of increase of 8.4%, and that of teachers lagging only slightly behind the rate of inflation with average annual increases of 7.5%.

On the other side of the coin pension benefits have not kept pace with inflation. The gap between the rise in the cost of living and the annual rate of increase in the base annuity of a teacher who retired in 1967 is pictured in Figure 2. The gap is that area between the consumer price index (represented by the full length of the bar graph) and line A which portrays the cost of living increases received by a 1967 retiree through the annual adjustment in the base annuity. A 1 1/2 percent adjustment was instituted in 1969 and was increased to 2 percent in 1972 (14, pp. 12-13). The early retirement proposal would increase the automatic adjustment in the base pension to 3 percent.

In order to keep pace with the rate of inflation some states link pension benefits to the consumer price index (e.g., Maryland, Massachusetts, New York). New Jersey has an automatic increase of the pension base equal to 50 percent of the rise in the consumer price index. As was noted by a pension analyst for the Illinois General Assembly, approaches relating benefits to the consumer price index are more costly to the employer, however, it provides greater security for employees by roughly keeping pace with inflation. He added, "Perhaps one of the greatest deficiencies of Illinois governmental retirement plans is the inadequacy of the adjustment of post-retirement benefits. The 2% increase has not kept pace with inflation and many older annuitants are experiencing severe problems as their benefits continually reduce in relative value" (20, p. 7-8).

The expectations of potential retirees with respect to inflation and their willingness or ability to accept risk with respect to future

price changes are important determinents of whether or not to retire. Representatives from teacher organizations have expressed the belief that under the present law the real income effect has a greater impact upon the retirement decision than either the age discrimination effect, the longetivity effect or the salary growth effect.[1/]

Blaming "...the escalating cost of living for reducing enthusiasm for the program" a school official in a district in Los Altos, California having an early retirement program added that "the problem is compounded by the fact that teacher salaries rise rapidly during periods of inflation, and higher salaries eventually mean more state retirement pay" (4, p. 20).

To illustrate the importance of the four effects upon the decision to retire early consider the hypothetical case of a teacher with 23 years of creditable service, age 55, and an average salary of $21,000. Furthermore, assume that over the next five years his/her salary would increase at a rate of 6 percent per year and that the average annual rate of inflation would equal 6 percent. In order to isolate the magnitude of the four effects--the age discrimination effect, the longevity effect, the salary growth effect and the real income effect--all variables determining the retirement annuity, other than the variable associated with the effect being considered, are held constant. Specifically each effect is defined as followed:

(1) The age discrimination effect; the difference in retirement income attributable to differences in age, all other variables being equal;

(2) The longevity effect; the difference in retirement income attributable to differences in the number of years of creditable service, all other variables remaining equal;

[1/] Opinion expressed during a meeting to plan the early retirement study attended by: Sally Pancrazio (IOE), David E. Ellsworth (IOE), Oscar Weil (Illinois Federation of Teachers).

(3) The salary growth effect; the difference in retirement income attributable to differences in the average salary upon which the retirement annuity in calculated, with all other variables remaining equal;

(4) The real income effect; the difference in real retirement income attributable to changes prices or the cost-of-living.

The following relationships exist between the base annuity if an individual retires at age 55, the base annuity if that same individual continues to teach until age 60, and between the age discrimination, the longevity, the salary growth, and the real income effects:

(1) The base annuity plus the sum of the three effects will equal the annuity if retirement is postponed, the difference between the early retirement annuity and the postponed retirement annuity is equal to the sum of the effects;

(2) The sum of the effects is equal to the incentive to postpone retirement or the disincentive for early retirement;

(3) The real income effect is the difference between the retirement annuities in real terms, or the purchasing power of the annuities compared to the same income during some other period.

Illustration I demonstrates the monetary impact of the age discrimination, the longevity and the salary growth effects upon the decision of the hypothetical individual to retire at the age of 55. Given the assumptions that have been made in constructing the illustration, the illustration contrasts the differences between the base annuity and the disincentive effects under the present retirement system and the proposed early retirement system.

Under the present system if the individual in the illustration retired at age 55, the base annuity would be $6,174. If all other factors were the same except, rather than being 55 years old, the individual were 60 years old at retirement, the base annuity would be $8,820. The difference between the two annuities ($2,646) is the age discrimination effect under the present retirement system.

Furthermore, by postponing retirement for five years, five additional years would be added to credited service. Considering that the individual in the illustration already has 23 years credited service, five additional years would increase the percentage applied to the average salary by 10.5%. The longevity effect is equal to the product of 10.5% and $21,000 or $2,205. The base annuity for a 60 year old retiree with an average salary of $21,000 and 28 years of experience is $11,025.

Illustration I.

Disincentives to Early Retirement
the Present System vs. the Early Retirement Proposal

Assumptions	Base Retirement Annuity under Present Retirement System	Base Retirement Annuity under Early Retirement Proposal
Age 55 23 yrs. credited service $21,000 average salary	$ 6,174	$ 9,660
Age 60 23 yrs. credited service $21,000 average salary	$ 8,820	$ 9,660
Age 60 28 yrs. credited service $21,000 average salary	$11,025	$11,760
Age 60 28 yrs. credited service $25,806 average salary	$13,548	$14,451
Disincentive Effects:		
Age Discrimination Effect	$ 2,646	0
Longevity Effect	$ 2,205	$ 2,100
Salary Growth Effect	$ 2,523	$ 2,691
Total Disincentive Effect	$ 7,374	$ 4,791

Over the last thirteen years the average of the annual rate of increase in average salary for teachers has been 6.6 percent. Thus, by postponing retirement a person could expect that the average salary upon which the base retirement annuity is computed would increase. Assuming that the salary of the person in the illustration increased at an average annual rate of 6% and he/she continued to teach another five years, the average salary for the retirement computation would increase from $21,000 to $25,806. This increase in average salary would add $2,523 to the base retirement annuity bringing the base annuity to $13,548. The increase in the annuity related to the increase in the average salary is the salary growth effect, or $2,523 in Illustration I.

As prices can be assumed to rise over the next five years, the magnitude of the retirement annuity is reduced in terms of its purchasing power. The purchasing power of the annuity is referred to as the real income of the retirement annuity. Under the present system, if prices rose at an average annual rate of 6% over the next five years, the real value of the base annuity for the person retiring at age 55 would fall from $6,174 to $4,749. If retirement were postponed for 5 years, the cash value of the base annuity would be $13,548. However, the real value of the annuity would be $10,422 in that it would require $13,548 five years from now to buy what $10,422 can buy as of now.

As the present retirement plan provides an automatic, annual 2% increase in the base retirement annuity, the decrease in the real retirement annuity due to inflation would be partially offset. Over a five year period the base retirement annuity for the hypothetical case would increase from $6,174 to $6,817. Thus in five years, due to the partial inflationary hedge of the 2% increase, the real value of the annuity would be $5,244 rather than $4,749.

Illustration II.

Disincentives to Early Retirement:
the Real Income Effect[1/]

Assumptions	Retirement Annuity as of 1981			
	Present Retirement System		Early Retirement Proposal	
	cash value	real value	cash value	real value
Retires at age 55	$6,817	$5,244	$11,199	$8,614
Retires at age 60	$13,548	$10,422	$14,451	$11,116
Change in Real Income (with 5 more yrs. of credited service):		+$5,178		+$2,502

1/Based on Illustration I and assumes retirement in 1976 and an average annual rate of inflation of 6 percent.

From the illustration and under the present system, the real disincentive for retiring at age 55 (i.e., the difference in the two annuities expressed in constant dollars) would be $5,178 ($10,422 minus $5,244). That is, the real retirement annuity would nearly double by continuing to work for five years (see Illustration II).

If the pension law were modified so as to allow early retirement without discounting the base annuity the incentive to continue teaching would be greatly reduced. The proposal offered by the Illinois Teachers' Retirement System has three parts, each of which has an impact upon the mounting disincentive to retire early. The hypothetical individual facing the early retirement decision can be used in order to analyze the implications of the early retirement proposal.

The age discrimination effect is eliminated by allowing those with 20 or more years of credited service to retire at age 55 without discounting the base annuity. As can be seen in Illustration I whether the individual

retires at age 55 or 60, so long as all other factors are equal, the base pension is the same. In the illustration, the base pension would be $9,660 under the early retirement proposal.

However, lowering the age at which one can retire without discount to 55 will not eliminate all of the disincentives effects. By continuing to teach, the individual would be able to receive a higher percentage of the average salary at retirement, being able to receive as much as 75 percent of the average salary after 37 1/2 years of credited service. The longevity effect continues as an early retirement disincentive until one accumulates 37 1/2 years of credited service. In the illustration the longevity effect of five years additional service is -$2,100, or $9,660 minus $11,760. As the average salary would likely rise during continued service there would continue to be a salary growth effect. Only if there were no increase in salary resulting from continued employment would the salary growth effect be zero. The salary growth effect in the illustration equals $2,691.

The combined effects of longevity and salary growth would increase the base annuity, an increase of $4,791 in the example. That is, under the assumptions made, by continuing to teach for five years the hypothetical person would increase his/her base annuity $4,791, from $9,660 to $14,451.

If the effects are deflated and the increase expressed in constant dollars, the magnitude of the disincentive effects are reduced. The difference in real income by retiring early and that which would be received by continuing to teach would be less under the early retirement proposal offered by the Illinois Teachers' Retirement System because they propose that the annual automatic increase in the base annuity be increased from 2 to 3 percent.

Using the example which has been developed, and assuming an increase in the cost-of-living averaging 6 percent over five years, the retirement annuity of the early retiree would equal $11,199, which due to inflation would be equivalent to $8,614 five years earlier. During the five years of retirement the real value of the early retiree's base annuity would decrease from $9,660 to $8,614 or $1,046. Had that individual continued teaching five years the current value of the annuity would equal $14,451--but the real value of the annuity in terms of its purchasing power five years earlier would equal $11,116. Therefore, the real value of the disincentive effects (i.e., the difference in the real income under the early retirement and the age 60 retirement illustrations) is equal to $2,502.

Although the early retiree would suffer a reduction in the real value of his/her annuity, it is clear that elimination of the age discrimination effect makes early retirement much more attractive. Increasing the annual automatic adjustment, thus reducing the impact of inflation upon the retirement annuity, also serves to decrease the real value of the disincentive effects.

In sum, the decision as to whether to take early retirement when one becomes eligible will depend upon the willingness to accept a retirement annuity with a lower real value in exchange for more leisure. Clearly the price of choosing leisure over work is less under the early retirement option. More individuals would be expected to retire before the age of 60. Fully cognizant of the variety of factors which will weigh upon the individual's retirement decision, the financial relief to school districts, assuming different levels of participation in the early retirement option, can be estimated.

Early Retirement and Financial Relief

Acceptance of early retirement by teachers and administrators will affect the local property taxpayer by relieving some pressure pushing educational costs ever upward. After remaining relatively constant during the early 1960's, operating expenditures per pupil since 1964 more than tripled, going from $510 per pupil in fiscal 1964 to $1561 per pupil in fiscal 1975. During that period support for education from property taxes has more than doubled, going from $0.8 billion in 1963-64 to $1.3 billion during the same period (see Appendix C). The proportion of expenditures for education going for administration and instruction have remained relatively constant, although administrational and instructional salaries have more than doubled (see Appendix D).

Confronted by rising costs, in part due to pressures exerted by salaries, school districts would find some relief if teachers and administrators on the high end of the salary schedule decided to retire. In 1975-76, certificated personnel in non-Chicago school districts of the ages 50 through 54 had an average salary of $19,821, while personnel in the under-30 group averaged $10,782 per year. [1/] In addition, those districts faced with declining enrollments would then have the prospect that reductions in force, where needed, can be accomplished through attrition and voluntary early retirement rather than through some arbitrary judgment of the administration or guidelines established through collective bargaining.

The aggregate savings that would accrue to Illinois school districts, and thus local taxpayers, due to the adoption of the early retirement proposal are dependent upon (a) the response of eligible school personnel

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[1/] These estimates are based upon data provided from the Teachers' Service Record.

to the early retirement option (i.e., the participation rate), and (b) the number of retirees replaced by new personnel (i.e., the replacement rate).

To estimate this local fiscal impact various assumptions are used with respect to the participation and replacement rates. The reasons for using a variety of assumptions, with respect to participation in the early retirement option, have been noted in the previous section of this paper. In addition, it should be recognized that, in spite of the fact that individuals who retire before the age of 60 and who have less than 35 years of service must pay a penalty through the discount of their annuity, 16 percent of the 1974-75 retirees in the Illinois Teachers' Retirement System accepted the penalty and retired early (see Appendix E). It should also be noted that although eligible for retirement and full benefits, in the downstate system only 19 percent of the staff 60-64 years of age and 41 percent of the staff 65 years or more chose to retire. One and one-half percent of the 1974-75 retirees were 70 years old or more. 1/ Considering that there is now a substantial proportion of individuals eligible for full retirement benefits but who have chosen not to retire, it is not to be expected that eliminating the annuity discount for those choosing early retirement will bring 100 percent participation to the early retirement option.

Although 100 percent participation is not likely, it is initially assumed in order to provide an estimate of the maximum level of relief the proposal would generate. Other participation rates used to develop the estimate of cost reduction are 50 percent, 25 percent, and 12 1/2

1/ These estimates are based upon data provided from the Illinois Teachers' Retirement System in combination with the Teachers' Service Record.

percent. The 12 1/2 percent participation rate is nearly double the rate at which individuals are choosing early retirement when their annuity is discounted.

In order to estimate the early retirement option salary relief from staff reductions accompanied by partial, complete, or no replacement the following steps are necessary: (1) estimate the number of retirees and their aggregate salary over a given period; (2) estimate the aggregate salary of replacement staff; (3) under the various participation and replacement assumptions determine the differences between numbers (1) and (2).

The cumulative staff reductions and financial gains that would accrue to local school districts over the next ten years under the four participation rate assumption are shown in Table 4. In order to construct this table, staff and salary data from Tables 2 and 3 were used, and the following assumptions were necessary:

(a) The early retirement option was first made available in 1975-76;

(b) All those who are 55 years of age or more have at least 20 years of credited service;

(c) There will be no turnover for certificated personnel within a given age bracket;

(d) Salaries will increase at an average annual rate of 6 percent so that personnel in the Illinois Teachers' Retirement System and age 54, earning $23.99 million in 1975-76, would be earning $25.42 million at the age of 55 if they continued to work, and so forth;

(e) Those that will retire are randomly distributed over the salary spectrum so that if 50 percent retire the aggregate salary would decrease by 50 percent.

Table 2

CERTIFICATED EMPLOYEES of the CHICAGO PUBLIC SCHOOL SYSTEM by AGE, TOTAL SALARY & AVERAGE SALARY (as of August 31, 1975)

Age	Number	Total[1] Salaries	Average[2] Salary
20	5	$ 41,422	$ 8,284
21	44	409,387	9,304
22	251	2,359,691	9,401
23	834	8,427,334	10,093
24	1,158	12,504,565	10,798
25	1,455	16,797,222	11,544
26	1,550	18,779,083	12,116
27	1,553	19,699,342	12,646
28	1,682	22,258,054	13,233
29	1,468	19,917,364	13,568
30	1,209	16,782,777	13,882
31	1,242	17,616,072	14,184
32	1,225	18,175,285	14,837
33	1,115	16,788,015	15,057
34	925	14,096,636	15,240
35	924	14,564,547	15,762
36	843	13,439,376	15,942
37	824	13,459,168	16,334
38	744	12,907,169	16,676
39	794	13,338,557	16,799
40	798	13,776,806	17,264
41	814	14,142,180	17,374
42	757	13,026,899	17,209
43	718	12,753,871	17,763
44	672	12,018,489	17,885
45	715	$12,804,729	$17,909
46	651	11,884,611	18,256
47	639	11,521,795	18,031
48	710	12,994,959	18,303
49	636	11,487,400	18,062
50	582	10,664,653	18,324
51	585	10,912,127	18,653
52	457	8,430,554	18,448
53	476	8,906,429	18,711
54	531	10,112,342	19,044
55	465	8,751,950	18,821
56	423	7,939,350	18,769
57	424	7,897,878	18,629
58	336	6,539,928	19,464
59	305	5,764,588	18,900
60	257	4,963,427	19,313
61	264	5,186,384	19,645
62	238	4,549,872	19,117
63	224	4,371,531	19,516
64	181	3,500,041	19,337
65	98	1,905,955	19,449
66	21	404,517	19,263
67 & above	19	373,046	19,634

Source: Acturial Statistics, Public School Teachers' Pension and Retirement Fund of Chicago, August 31, 1975, combining Table 1 and 2, pp. 2 & 3.

1/Salaries for 1974-75 school year.

2/Average salary computed by dividing total salaries at a specified age by the number of staff at that age.

Table 3

CERTIFICATED EMPLOYEES of the ILLINOIS PUBLIC SCHOOL SYSTEM BY AGE, TOTAL SALARY, & AVERAGE SALARY, 1975-76 (excluding Chicago)

Age	Number	Total[1/] Salaries	Average[2/] Salary
21	9	$ 84,503	$ 9,389
22	160	1,428,070	8,925
23	2,143	19,635,869	9,163
24	4,068	39,155,687	9,625
25	5,377	54,198,450	10,080
26	5,611	59,412,556	10,589
27	5,361	59,068,675	11,018
28	5,332	61,663,906	11,565
29	5,677	69,103,081	12,172
30	4,788	60,592,069	12,655
31	3,528	46,718,850	13,242
32	3,299	44,838,400	13,592
33	3,380	47,654,656	14,099
34	3,154	45,668,575	14,480
35	2,591	38,442,512	14,837
36	2,263	33,876,094	14,970
37	2,166	32,996,662	15,234
38	2,165	33,527,750	15,486
39	2,035	31,537,969	15,498
40	2,005	31,794,825	15,858
41	2,093	33,571,356	16,040
42	1,807	28,932,956	16,012
43	1,825	29,693,737	16,271
44	1,819	29,639,181	16,294
45	1,865	$30,781,637	$16,505
46	1,885	30,816,831	16,348
47	1,856	30,433,012	16,397
48	1,856	30,866,769	16,631
49	1,736	29,024,337	16,719
50	1,647	27,552,925	16,729
51	1,542	25,860,000	16,770
52	1,500	25,178,375	16,786
53	1,441	23,755,119	16,485
54	1,446	23,985,475	16,587
55	1,475	23,832,569	16,158
56	1,305	20,865,931	15,989
57	1,122	17,917,369	15,969
58	1,222	19,354,444	15,838
59	1,026	16,390,044	15,975
60	944	14,908,244	15,793
61	835	13,304,706	15,934
62	728	11,451,850	15,731
63	596	9,330,612	15,655
64	502	7,800,050	15,538
65	385	5,939,458	15,427
66	213	3,170,025	14,883
67 & above	120	1,804,485	15,037

Source. Teachers Service Record, 1975-76

1/Salaries for 1975-76 school year.

2/Average salary is computed by dividing total salaries at a specified age by the number of staff at that age.

Quite probably the distribution of those opting for early retirement will be skewed to the high end of the salary spectrum because they would have a more comfortable retirement income. Although basing the estimates of salary relief upon an assumption of salaries higher than that of the mean for a given age group would increase the amount of salary relief, without prior knowledge of the distribution of salaries of those who would select early retirement, it is best to assume a random distribution.

The problem of determining the number of persons eligible for the early retirement option is complicated by the fact that the two teachers' retirement systems in Illinois are on differing fiscal years. The Illinois Teachers' Retirement System operates on a July 1 - June 30 fiscal year, while the retirement system for teachers in the Chicago school district operates on a September 1 - August 31 fiscal year. At the time of analysis the latest data available for Chicago covered the 1974-75 school year. The latest data available for the remainder of the State were for the 1975-76 school year. Therefore, in order to make the data comparable between the two systems so as to arrive at the numbers in Table 4 it was necessary to assume no turnover by age group in the Chicago system and to increase the salary paid to a given age group by 6 percent. After adjusting the data for the Chicago system (in Table 2) in the above manner, the data are then added into the data for the remainder of the school personnel in Illinois (Table 3).

Thus, the number of persons eligible for the early retirement option, if it had gone into effect in 1975-76, is equal to the number of members of the Illinois Teachers' Retirement System aged 55-59 (Table 3) plus the number of members of the Chicago system aged 54-58 (Table 2),

Table 4

NUMBER OF POSITIONS VACATED AND SALARY RELIEF ASSUMING 100%, 50%, 25%, & 12 1/2% PARTICIPATION IN THE EARLY RETIREMENT OPTION .

Year Option Offered	100% Participation		50% Participation		25% Participation		12 1/2% Participation	
	No. Positions	Salary Relief[1]	No. Positions	Salary Relief[1]	No. Positions	Salary Relief[1]	No. Positions	Salary Relief[1]
1st Year[2]	8,329	$141.58	4,165	$70.79	2082	$35.40	1041	$17.70
2nd Year	1,922	$35.31	961	$17.66	481	$8.83	240	$4.41
3rd Year	1,898	$36.62	949	$18.31	475	$9.16	237	$4.58
4th Year	2,085	$43.61	1,043	$21.81	521	$10.90	261	$5.45
5th Year	2,124	$46.76	1,062	$23.38	531	$11.69	266	$5.85
6th Year	2,283	$55.19	1,142	$27.60	571	$13.80	285	$6.90
7th Year	2,446	$62.96	1,223	$31.48	612	$15.74	306	$7.87
8th Year	2,495	$67.36	1,248	$33.68	624	$16.84	312	$8.42
9th Year	2,507	$71.26	1,254	$35.63	627	$17.82	313	$8.91
10th Year	2,600	$77.86	1,300	$38.93	650	$19.47	325	$9.73
Comulative Change	-28,689	-$638.51	-14,347	-$319.27	-7,174	-$159.65	-3,586	-$79.82

[1]In millions of dollars.
[2]Assuming the Early Retirement Option has begun in 1975/76.

or 8,329. The total salary paid those eligible is the sum of the salary paid the 54-58 age group in the Chicago system increased by 6% to allow for a 6% salary increase between 1974-75 and 1975-76. The aggregate salary of those eligible for the early retirement option in 1975-76 equals $141,580,000.

The number of positions vacated and the salary relief generated, as reflected in Table 4, is based upon the procedure described above. Thus, if 100% of those eligible for the early retirement option chose to retire, the first year the program would vacate 8,329 positions and reduce salary expenditures by school districts by $141,580,000. The lower rates of participation (50%, 25%, and 12 1/2%) reflect fractions of impact felt under the assumption of 100% participation.

Assuming 1976-77 as the second year of the program, an additional 1,922 individuals paid a salary of $35,310,000 would be eligible. If 50% participated 961 positions would be vacated, reducing salary payments by $17,660,000. As can be seen from Table 4, over a ten year period the number of positions vacated ranges from 28,689 to 3,586 and salary relief ranges from $683,510,000 to $79,820,000 depending upon the assumption with respect to the proportion of those eligible for the early retirement option who would accept the opportunity.

As was stated in the previous section of the paper, part of the benefit of the early retirement option is that the vacated positions allow employment of more beginning teachers than are presently being employed. Replacement by new teachers will allow a reduction in the number of unemployed and underemployed teachers and may increase the overall productivity of the teaching system by injecting new vitality. However, replacing retiring staff with new staff reduces the salary

Table 5

SALARY PAID ASSUMING VARIOUS RATES of REPLACEMENT[1/]
(in millions of dollars)

No. Yrs. Proposal in Operation	Assuming 100% Replacement	50% Replacement	25% Replacement	12 1/2% Replacement
First Year	$74.54	$37.27	$18.64	$ 9.32
Second Year	$18.23	$ 9.12	$ 4.56	$ 2.28
Third Year	$19.09	$ 9.54	$ 4.77	$ 2.38
Fourth Year	$22.23	$11.11	$ 5.56	$ 2.78
Fifth Year	$24.00	$12.00	$ 6.00	$ 3.00
Sixth Year	$28.12	$14.06	$ 7.03	$ 3.51
Seventh Year	$31.93	$15.97	$ 7.98	$ 3.99
Eighth Year	$34.53	$17.26	$ 8.63	$ 4.32
Ninth Year	$36.78	$18.39	$ 9.16	$ 4.60
Tenth Year	$40.43	$20.21	$10.11	$ 5.05

1/Assumes replacement of retiring teacher with a beginning teacher holding a B.A., the median salary for whom was $8950 in 1975-76 and increases at an average annual rate of 6 percent per year. Also, assumed that 100% of those eligible take advantage of the early retirement option.

relief made possible by the early retirement program. To the extent that the new staff are not beginning teachers, but from the active reserve of unemployed or underemployed teachers, the relief generated will be less. For the purposes of the remainder of this discussion it is assumed that beginning teachers are hired as replacement staff.

During a period of declining enrollment, like that which has been forecasted for the indefinite future for Illinois, 100% replacement of retiring staff is unlikely. However, even should total replacement occur, due to the differences in salaries of beginning teachers and retiring teachers, school districts would still realize benefits through salary relief.

Table 5 presents the total salary payments to staff replacing retirees. The table is based upon the assumption of retiree replacement by a beginning teacher holding a B.A. and being paid a salary of $8,950 the first year (1975-76). A further assumption is that the average salary for this group of incoming teachers will increase at a rate of 6% per year. Table 5 is further based upon the assumption of 100% participation in the early retirement option.

Following these assumptions, if all 8,329 retirees were replaced by beginning teachers averaging $8,950 the total salary paid the replacement staff would have been $74,544,550 (rounded to $74,540,000 in Table 5). If only half of the retirees were replaced the salary payment to new staff would have been $37,270,000 (see Table 5). The second year, with 100% replacement of 1,922 retirees the salary payment would be $18,230,000 the average salary being equal to $9,489 (an increase of 6% over the average salary in 1975-76).

Table 6 combines the assumptions of four different rates of participation with four different rates of replacement so that the salary relief to local school districts can be examined under 16 different combinations of participation and replacement rates. The difference in the total salary paid retiring staff and the total salary paid new staff for any given year, and under any given assumption as to participation and replacement, is presented in Table 6. The salary relief over a ten year period is also presented.

Salary relief is greatest during the first year that the early retirement option is offered due to the number of personnel at the ages 55 through 59 who immediately become eligible. Each year, thereafter, a smaller group of cohorts become eligible. Also, as can be seen in the table, the higher the rate of participation and the lower the rate of replacement, the greater the salary relief.

Following a somewhat conservative assumption of participation of only one-fourth of those eligible for the option, salary relief during the first year of the program would have been equal to between $33,070,000 and $16,760,000 depending upon the number of retirees replaced by new teachers. Over a ten year period the total relief would be equal to between $77,180,000 and $149,320,000, again depending upon the replacement rate assumed.

On the other hand, assuming maximum participation and minimal replacement, salary relief would have equaled $132,960,000 in 1975-76 and would equal $597,270,000 over the first ten years.

In addition to the expenditure relief gained through salary reductions, relief can also be gained through a reduction in expenditures for support materials, services and benefits provided teachers.

Table 6

Local District Salary Relief Derived from the Early Retirement Proposal
Assuming Rates of Participation and Replacement of 100%, 50%, 25%, & 12 1/2%
(in Millions)

Year Option Offered	100% Participation Replacement Rates of				50% Participation Replacement Rates of				25% Participation Replacement Rates of				12 1/2% Participation Replacement Rates of			
	100%	50%	25%	12 1/2%	100%	50%	25%	12 1/2%	100%	50%	25%	12 1/2%	100%	50%	25%	12½%
First Year	$67.04	$104.31	$122.94	$132.96	$ 33.52	$ 52.15	$ 61.47	$ 66.13	$16.76	$ 26.08	$ 30.74	$ 33.07	$ 8.38	$13.04	$15.37	$16.53
Second Year	17.08	26.19	30.75	33.03	8.54	13.10	15.38	16.52	4.27	6.55	7.69	8.26	2.13	3.27	3.84	4.12
Third Year	17.53	27.08	31.85	34.23	8.77	13.54	15.92	17.12	4.39	6.77	7.97	8.56	2.19	3.39	3.98	4.28
Fourth Year	21.38	32.50	38.05	40.83	10.70	16.25	19.02	20.42	5.34	8.12	9.51	10.20	2.67	4.06	4.75	5.10
Fifth Year	22.76	34.76	40.76	43.76	11.38	17.38	20.38	21.88	5.69	8.69	10.19	10.94	2.85	4.35	5.10	5.47
Sixth Year	27.07	41.13	48.16	51.68	13.54	20.57	24.09	25.84	6.77	10.29	12.04	12.92	3.39	5.14	6.02	6.46
Seventh Year	31.03	46.99	54.98	58.97	15.51	23.50	27.49	29.48	7.76	11.75	13.74	14.74	3.88	5.87	6.87	7.37
Eighth Year	32.83	50.10	58.73	63.04	16.42	25.05	29.36	31.52	8.21	12.52	14.68	15.76	4.10	6.26	7.34	7.88
Ninth Year	34.48	52.87	62.07	66.66	17.24	26.44	31.03	33.33	8.63	13.22	15.52	16.67	4.31	6.61	7.76	8.33
Tenth Year	37.43	57.65	67.75	72.81	18.72	28.82	33.88	36.40	9.36	14.42	16.94	18.20	4.68	7.20	8.46	9.09
Cumulative Reduction	$308.63	$473.58	$556.04	$597.27	$154.34	$236.80	$278.03	$298.64	$77.18	$118.41	$139.02	$149.32	$38.58	$59.19	$69.49	$74.63

Non-Salary Expenditure Relief

Although salaries account for the largest portion of the educational dollar, other costs are significant. Of growing importance are expenditures for building maintenance and operations, increasing from 17.7% of total expenditures in 1969-70 to 20.8% in 1974-75. Building expenditures, expenditures for transporting students, other student and community service activities, and debt service are not directly related to the size of the staff. Expenditures more directly related to the size of the teaching and administrative staff include supplies, travel, teacher aides, secretarial and clerical support, and payments for retirement and insurance benefits. 1/

Expenditures by school districts for benefits and in support of instructional and administrative staff have increased from $213.4 million in 1970-71 to slightly under $311.8 million in 1974-75. Expenditures per certificated staff member have jumped 30.4% from $1,782 per staff member to $2,375 (see Table 7). The expenditures for 1974-75 were equal to 17% of the expenditures for salaries for administration and instructional staff. It should be noted that the indirect costs indicated in Table 7 are underestimates of the total indirect costs in the expenditures for equipment used by the staff are not included. Therefore, the ratio of employee benefit plus indirect costs to employee salaries probably approaches 1:5, or 20% of salaries. To estimate the additional expenditure relief resulting from reduced employee benefits and indirect

1/ Although the retirement system is generally supported by contributions of members and funds from the State, some districts absorb part of the member's cost. Only the Chicago school district has authorization to extend, as part of its tax rate, a property tax earmarked for retirement system contribution.

Table 7

RETIREMENT AND INSURANCE AND INDIRECT SUPPORT EXPENDITURES, FOR ADMINISTRATIVE AND INSTRUCTIONAL STAFF, 1970/71-1974/75

Year	Full-Time and Part-Time Certificated Staff	Retirement and Insurance for Staff	Indirect Support Expenditures	Total	Per Staff Member
1970-71	119,752	$66,197,794	$147,202,900	$213,400,694	$1,782
1971-72	123,824	$66,077,216	$154,788,758	$220,865,974	$1,784
1972-73	128,505	$99,248,036	$166,334,667	$265,582,703	$2,067
1973-74	131,331	$89,614,576	$182,483,914	$272,098,490	$2,072
1974-75	134,266	$99,153,713	$212,685,847	$311,839,560	$2,375

Source: Data from the Fall Enrollment and Housing Report, expenditure data from the Annual Financial Report. Staff

1/Includes only expenditures made from the educational funds as expenditures made from other funds are more directly related to facilities in use and transportation services.

2/Includes supplies, travel, and contractual services for administrative and instructional staff, expenditures for salaries of teacher aides, secretaries and clerks, and other salaries. Does not include travel, supplies and contractual services for attendance, health, student and community services, summer school, and Vocational Education Research Development.

costs, it will be assumed that such relief will be equal to 20% of the salary reductions from the early retirement program.

Table 8 presents the relief provided school districts through their ability to reduce expenditures for employee benefits and indirect costs. Again the magnitude of the relief is related to the participation and replacement rate. As the figure represents 20% of the salary relief data presented in Table 6, only the two most extreme cases with respect to participation rates are used. As can be seen from the table, the

Table 8.

Relief from Reduced Employee Benefit Payments and Indirect Costs (assuming participation rates of 100% and 12 1/2% and replacement rates of 100%, 50%, 25%, and 12 1/2%): Figures in millions of dollars

Year Option Offered	100% Participation Replacement Rates of:				12 1/2% Participation Replacement Rates of:			
	100%	50%	25%	12½%	100%	50%	25%	12½%
1st Year	$13.41	$20.86	$24.59	$26.59	$1.68	$2.61	$3.07	$3.31
2nd Year	3.42	5.24	6.15	6.61	.43	.65	.77	.82
3rd Year	3.51	5.42	6.37	6.85	.44	.68	.80	.86
4th Year	4.28	6.50	7.61	8.17	.53	.81	.95	1.02
5th Year	4.55	6.95	8.15	8.75	.57	.87	1.02	1.09
6th Year	5.41	8.23	9.63	10.34	.68	1.03	1.20	1.29
7th Year	6.21	9.40	11.00	11.79	.78	1.17	1.37	1.47
8th Year	6.57	10.02	11.75	12.61	.82	1.25	1.47	1.58
9th Year	6.90	10.57	12.41	13.33	.86	1.32	1.55	1.67
10th Year	7.49	11.53	13.55	14.56	.94	1.44	1.69	1.82
Cumulative Change	$61.75	$94.72	$111.12	$119.60	$7.73	$11.83	$13.89	$14.93

Table 9

Total Expenditure Relief to Local School Districts Generated by Early Retirement Proposal, Assuming 100%, 50%, 25% and 12 1/2% Participation and Replacement (in millions of dollars, rounded to nearest hundredth)

Year Option Offered	100% Participation Replacement Rates of				50% Participation Replacement Rates of				25% Participation Replacement Rates of				12 1/2% Participation Replacement Rates of			
	100%	50%	25%	12 1/2%	100%	50%	25%	12 1/2%	100%	50%	25%	12 1/2%	100%	50%	25%	12 1/2%
1st Year	$ 80.45	$125.17	$147.53	$159.55	$ 10.22	$ 62.58	$ 73.76	$ 79.36	$20.11	$ 31.30	$ 36.89	$ 39.68	$10.06	$15.65	$18.44	$19.84
2nd Year	20.50	31.43	36.90	39.64	10.25	15.72	18.46	19.82	5.12	7.86	9.23	9.91	2.56	3.92	4.61	4.94
3rd Year	21.04	32.50	38.22	41.08	10.52	16.25	19.10	20.54	5.27	8.12	9.56	10.27	2.63	4.07	4.78	5.14
4th Year	25.66	39.00	45.66	49.00	12.84	19.50	22.82	24.50	6.41	9.74	11.41	12.24	3.20	4.87	5.70	6.12
5th Year	27.31	41.71	48.91	52.51	13.66	20.86	24.46	26.26	6.83	10.43	12.23	13.13	3.42	5.22	6.12	6.56
6th Year	32.48	49.36	57.79	62.02	16.25	24.68	28.91	31.01	8.12	12.35	14.45	15.50	4.07	6.17	7.22	7.75
7th Year	37.24	56.39	65.98	70.76	18.61	28.20	32.99	35.38	9.31	14.10	16.49	17.69	4.66	7.04	8.24	8.84
8th Year	39.40	60.12	70.48	75.65	19.70	30.06	35.23	37.82	9.85	15.02	17.62	18.91	4.92	7.51	8.81	9.46
9th Year	41.38	63.44	74.48	79.99	20.69	31.73	37.24	40.00	10.36	15.86	18.62	20.00	5.17	7.93	9.31	10.00
10th Year	44.92	69.18	81.30	87.37	22.46	34.58	40.66	43.68	11.23	17.30	20.33	21.84	5.62	8.64	10.15	10.91
Cumulative Relief	$370.38	$568.30	$667.25	$717.57	$185.20	$284.16	$333.63	$358.37	$91.61	$142.08	$166.83	$179.17	$46.31	$71.02	$83.38	$89.56

indirect and employee benefit expenditures would have decreased by between $1,680,000 to $26,590,000 in 1975-76, depending upon the participation and replacement rates. Over a ten year period the relief to school districts through reduced expenditures for indirect costs and employee benefits would range from $7,730,000 to $119,600,000.

Total Relief of the Early Retirement Proposal

The total relief to school districts is the sum of the salary relief and the relief in expenditures for employee benefits and indirect costs. In essence this represents the total measurable benefit of the early retirement proposal.

Had the early retirement proposal been operative during the last school year the estimates indicate that school districts would have spent millions of dollars less then they actually did spend. Looking at the two most extreme cases there is a substantial difference between the relief estimates, but even the most modest savings are significant. Assuming 100% participation and minimal replacement (12½%) the relief would have been equal to $159,550,000. Assuming minimal participation (12½%) and maximum replacement (100%) of those retiring, the relief would have been equal to $10,060,000.

Using the same extreme comparisons of the financial benefits of the early retirement program to school districts, over a ten year period the cumulative relief grows. With maximum participation and minimal replacement, relief would equal $716,570,000. With minimal participation and replacement of all retirees, over a ten year period relief would equal $46,310,000. The total relief generated under the various participation and replacement rates is presented in Table 9.

SUMMARY

After decades of seemingly uninterrupted growth, the educational sector now faces a difficult adjustment period. Declining enrollments, which have occurred over the last four years, are projected to continue over the next decade with enrollments reaching 1,857,000 by 1985-86--a decrease of 21.8 percent from the 1971 high of 2,373,659.

Enrollment shrinkage creates a number of interrelated problems for school districts: reduced state aid while costs continue to rise; underutilized and unutilized facilities; a stable, experienced staff at the high end of the salary scale with limited opportunities for fresh, new staff starting at beginning salaries; and increasing citizen pressure for achieving concurrently reduced educational expenditures and higher quality education for their children.

Assuming sufficient resources are currently allocated for the educational sector to operate efficiently, economic efficiency requires that, unless the quality of education can be substantially improved by maintaining existing resource commitments, the resources directed to education should be reallocated within education and shifted to other sectors of the economy as enrollments decrease.

Resource adjustment presents some real problems for educational policy makers and administrators. Among these difficult problems is the need for reductions in force. With 66 percent of the educational fund expenditures going for salaries of certificated administrative and instructional staff, significant cost reductions can follow only from reductions in force.

Normal attrition will not achieve the required reductions in force. The net change in certificated full-time staff reported between this

year and last, equal to 3,109 positions, could only be attained by terminations supplemented by not filling vacated positions.

With the dramatic enrollment decreases expected over the next five years, prospects are not bright for improved employer-employee relations as it becomes necessary for further, and even more drastic, staff cuts. It should be expected that reductions-in-force issues will receive increased attention in collective bargaining negotiations. Increasing the number of voluntary retirements, after an extended period of service to education, provides an attractive mechanism to ease the adjustment process.

Membership in the Downstate and the Chicago teachers' retirement systems totals approximately 133,000. Of the participants in the two systems, roughly 8 percent are ages 50-54, 6 percent are 55-59 years of age, 4 percent are 60-64 years of age, and less than one percent are 65 years of age and above.

Under the present retirement system there are substantial disincentives to early retirement, which the study identifies as (a) the age discrimination effect, (b) the longevity effect, (c) the salary growth effect, and (d) the real income effect. The age discrimination effect is identified as the present policy, which assesses a penalty of 6 percent for each year under 60 years of age at retirement as long as 35 or more years of credited service have not been compiled. The longevity effect is defined as the disincentive to early retirement that occurs due to the fact that each additional year of service results in receiving a base annuity that is a higher percentage of the base salary upon which the annuity is computed. The longevity effect becomes nonexistent only when a person has sufficient years of service that the retiree can

receive a base annuity equal to 75% of the base salary upon which the annuity is computed. The salary growth effect is identified as that incentive to continue to work and participate in the retirement system so long as one's salary is increasing, because tne increase in salary will increase the average salary upon which the base annuity is computed. The real income effect is the impact of known or anticipated changes in the cost of living upon the retirement decision.

The early retirement proposal, an approach being called for by the State of Illinois Teachers' Retirement System and endorsed by the Illinois Task Force on Declining Enrollments, would eliminate the age discrimination effect by providing that if a participant in the system had at least 20 years of credited service, he/she could retire at age 55 without having the pension discounted.

Although the longevity effect would not be eliminated, the early retirement proposal would replace the present graduated formula with a flat rate formula, in which the formula would be used to compute the percentage of the base salary to which he/she is entitled for a base retirement annuity. Whereas the graduated formula provides a progressive incentive to continue compiling creditable service, the flat rate formula is neutral in this respect.

The proposal would reduce the disincentives created by inflation by increasing from 2 to 3 percent the annual increase in the base retirement annuity. However, the early retirement proposal would have no impact upon the salary growth effect.

Predicting the response to an early retirement option involves subjective judgment because of the continued existence of the salary growth effect and the longevity effect, only the partial elimination of

the real income effect, and the difficulty in predicting how school personnel feel about trading work for leisure.

Using various assumptions about the rate of participation in the early retirement option and about how many of the retirees would be replaced by beginning teachers, the study found that the early retirement option would provide salary relief initially benefiting local taxpayers by an amount of between $8.4 million to $133 million, depending upon the participation and replacement assumptions utilized. In addition, employee benefit payments and indirect costs would be reduced by from $1.7 million to $26.6 million. Over a ten year period relief from both sources could total as high as $717.57 million (assuming 100% participation and 12 1/2% replacement) or as low as $46.3 million (assuming only 1 out of 8 eligible educators took early retirement and that all vacated positions were filled). Also depending upon the rate of participation, between 3,600 to 28,700 teaching positions would be vacated and open to new teachers.

When making a judgment concerning the desirability of providing the early retirement option, consideration should be given to the fact that the present retirement system encourages continued service to education in a period of time when resources should be reduced. The early retirement proposal provides a mechanism to encourage the needed resource adjustment, bringing about greater overall efficiency within the economy.

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APPENDICES

Appendix A
Early Retirement Plan for
Township High School District 214
Mt. Prospect - Cook County

3.840 EARLY RETIREMENT INCENTIVE

1) Prior to reaching the mandatory age (65) a District 214 teacher may elect to participate in the early retirement program.

2) To be eligible, the teacher must have completed at least ten (10) years of full-time employment in District 214, must be at least 55 years of age and no older than 60 by June 30th of the retirement year. The teacher must notify the Superintendent, in writing, of his or her intention to participate by January 1 of the school year prior to retirement.

3) Annual compensation will be one-fifth of the teacher's base salary for the last year of full-time teaching; but, in no case, will the sum of money exceed $5,000 per year. The payment will be made monthly so long as the teacher receives compensation from the Illinois Teachers' Retirement System, except that no payment will be made after the school year in which the teacher reaches the age of sixty, (60). The payment will be made annually for a maximum of five consecutive years.

4) Upon the death of a retiree receiving early retirement compensation, the unpaid portion of that current year's allotment shall be due and payable as above to his or her designated beneficiary.

5) The Teachers involved in the program are required to serve an equivalent of 1/5th of the teacher work year in activities in their field of expertise mutually arranged in consultation with the Superintendent on an annual review basis.

6) Notwithstanding any of the foregoing provisions, the Board reserves the right to terminate the early retirement program at any time with respect to persons who are not participating in the retirement program in the school year when the termination becomes effective. Employees already on early retirement provisions of the early retirement program or those who during the year have been approved for the program will be allowed to continue despite the termination of the program with respect to all other employees. The District reserves the right to establish a maximum number of people eligible in any given year.

7) The time restriction (section 2) will be amended to July 1, 1976 for the 1976-77 school year.

8) This item will be reviewed as a "non-economic" for 1977-78.

Appendix B

KEY DIFFERENCES BETWEEN THE TEACHERS' RETIREMENT SYSTEM of the STATE of ILLINOIS and the PUBLIC SCHOOL TEACHERS' PENSION & RETIREMENT FUND of CHICAGO and the EARLY RETIREMENT PROPOSAL

	Chicago & Illinois Teachers' Retirement System	Early Retirement Proposal
Early Retirement:	May retire at age 55 with 20 years of service but the base retirement annuity will be reduced by 6% for each year below the age of 60, unless one has 35 years of service.	May retire at the age of 55 with 20 years of service without any discount of the base retirement annuity.
Post-Retirement Adjustment:	2% automatic annual increase of the base pension.	3% automatic annual increase of the base pension.
Contribution to the System:	8% of salary	9% of salary
Benefit Formula:	A graduated formula of 1.67% for each of the 1st 10 yrs., 1.9% for each of the 2nd 10 yrs., 2.10% for each of the 3rd 10 yrs., and 2.30% for each year in excess of 30.	A flat 2% for each year of credited service.

Appendix C

TOTAL REVENUES, ILLINOIS PUBLIC SCHOOL DISTRICTS, BY CATEGORY OF REVENUE

	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
Local Taxes	$ 798,624,000	$ 855,307,000	$ 941,105,000	$ 789,423,000	$1,096,486,000	$1,079,511,000	$1,510,433,000
General State Aid	$ 187,334,000	$ 201,118,000	$ 240,077,000	$ 276,538,000	$ 369,131,000	$ 383,151,000	$ 615,076,000
Other Special State Funds	$ 40,230,000	$ 43,796,000	$ 44,521,000	$ 44,663,000	$ 47,167,000	$ 68,017,000	$ 68,490,000
Federal Funds	$ 19,447,000	$ 22,854,000	$ 42,546,000	$ 74,085,000	$ 72,525,000	$ 88,192,000	$ 102,472,000
Student & Comm. Services	$ 73,214,000	$ 78,952,000	$ 95,424,000	$ 110,697,000	$ 118,942,000	$ 100,194,000	$ 98,682,000
All Other Revenue	$ 16,668,000	$ 17,048,000	$ 258,310,000	$ 355,015,000	$ 239,161,000	$ 219,851,000	$ 165,119,000
Total Revenue Receipts	$1,135,517,000	$1,219,075,000	$1,621,983,000	$1,650,422,000	$1,943,867,000	$1,938,915,000	$2,560,273,000

	1970-71	1971-72	1972-73	1973-74	1974-75
Local Taxes	$1,145,061,000	$1,660,786,000	$1,379,426,000	$1,926,493,000	$1,782,606,000
General State Aid	$ 718,438,000	$ 758,749,000	$ 864,181,000	$ 903,115,000	$1,074,437,000
Other Special State Funds	$ 102,621,000	$ 113,246,000	$ 160,971,000	$ 151,116,000	$ 262,283,000
Federal Funds	$ 153,628,000	$ 145,474,000	$ 158,843,000	$ 156,145,000	$ 208,515,000
Student & Comm. Services	$ 101,016,000	$ 104,350,000	$ 104,330,000	$ 115,155,000	$ 116,129,000
All Other Revenue	$ 146,893,000	$ 230,637,000	$ 217,814,000	$ 278,747,000	$ 411,834,000
Total Revenue Receipts	$2,367,656,000	$3,013,241,000	$2,885,566,000	$3,530,771,000	$3,855,804,000

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Appendix D

Total Expenditures of Illinois Public Schools, by Category (rounded to nearest tenth of a million).

	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75
Administration	$43.8	$44.3	$47.2	$51.8	$62.9	$68.4	$82.7	$90.9	$95.6	$100.7	$106.8	$120.1
Instruction	$638.1	$686.9	$761.8	$876.2	$983.3	$1,114.5	$1,306.8	$1,489.8	$1,590.3	$1,682.9	$1,817.5	$2,052.2
Student & Community Services	1/	1/	$106.5	$123.9	$132.6	$142.8	$165.0	$179.0	$194.3	$214.2	$217.3	$239.7
Operations, Maintenance & Fixed Charges	1/	1/	$251.4	$281.4	$321.5	$344.2	$416.3	$489.9	$532.9	$596.7	$671.5	$783.7
Bonds & Interest	1/	1/	$88.1	$93.9	$96.5	$103.4	$113.8	$120.8	$127.7	$133.7	$138.6	$144.3
Capital Outlay	$156.4	$151.3	$181.7	$200.8	$220.3	$241.9	$244.1	$243.9	$227.8	$229.0	$256.2	$370.0
All Other	1/	1/	$36.2	$115.4	$18.6	$22.1	$22.3	$29.9	$34.1	$39.1	$40.8	$60.4
Total Expenditures	$1,224.8	$1,295.2	$1,472.9	$1.743.5	$1,835.7	$2,037.4	$2,351.1	$2,664.2	$2,802.6	$2,996.2	$3.248.8	$3,770.4

Source: Annual Financial Reports submited by public school districts

Appendix E

TEACHERS' RETIREMENT SYSTEM
RETIREMENTS BY ATTAINED AGE

ATTAINED AGE AT RETIREMENT	1972/73	1973/74	1974/75	1975/76
55	69	69	85	91
56	53	41	59	66
57	63	68	62	54
58	95	70	75	78
59	108	108	79	88
60	280	243	250	289
61	239	197	179	185
62	192	189	193	185
63	231	193	145	140
64	219	156	142	134
65	363	310	296	289
66	297	232	198	200
67	70	45	39	36
68	43	27	40	39
69	33	12	19	20
70	28	13	8	12
71	8	7	6	14
72	11	9	0	6
73	4	3	7	2
74	2	0	0	1
75	0	1	2	2
76	1	1	2	2
77	1	0	1	1
78	2	0	1	3
79	0	1	1	2
80, and over	1	0	0	4
	2413	1995	1889	1943